inspiration through production (including interim alterations and redesigns) to final disposition through that product's entire lifecycle.

While Brown can be interpreted to include "all the information needed for a particular design", this cannot reasonably be interpreted, in light of the entirety of Brown, as reading on the information needed for ***management*** of a particular design. Brown's focus was on a tool that "allows for seamless interaction between any level of the supply chain to any other level and it allows the seamless sharing of data", or as it's title states, "Electronic Product Design System"; it makes no mention of either management of the design and/or manufacturing process, or of a product's lifecycle.

Applicant's invention, on the other hand, is focusing on a "A PLM-Supportive CAD-CAM Tool For Interoperative Electrical & Mechanical Design For Hardware Electrical Systems", or a Product Lifecycle Management tool. The difference between the two is that Brown focuses on supporting the process of a single person's designing each individual product, while Applicant focuses on the supporting the process of managing the design and manufacture of at least one, and most probably a series, of products from the first glimmer of an idea to the final sale of the last item made.

Like emendations were made for Claims 3-6, to specifically include claim elements particular to Product Lifecycle Management pertaining to sourcing (Claims 3 &4) and changing (Claim 5-6) a design and/or resulting product. Brown does not mention the use of management-level information, especially information pertaining to constraint alterations or Engineering Change Orders that reflect changes in the real world; but Applicant's invention specifically uses these to distinguish ***current*** state information, including decision and accountability information, which are each incorporated throughout Applicant's invention.

Furthermore, the use of coordinating information that incorporates management-imposed, manufacturing or business-related (as opposed to engineering-related) design constraints across products, are specifically stated in both Claims 7 and 8 as amended. There is nothing in Brown's "design files" that reflects this level of management-related information concerning a product or a design; Brown's invention is both particular and limited to a single design at any one use. The coordination embedded in Applicant's invention is outside the scope of conception of Brown's invention.

Claim 9 has been cancelled, as the OA states that a 'save' function may be implied for all software programs. The differentiation between a 'product' and a 'project' therein now is addressed in the first claim's Project Management subsystem.

Claim 10 now specifically includes in the claim both management and process-referential information that is absent from Brown; and, as this is incorporated in Claim 11, Claim 11 is not amended. While Brown does read on the provision of vendor-supplied date, there is nothing in Brown (esp. in Paragraphs [0061-0068]) that reads on providing as part of any automatic message either status data concerning either the current state of a design or product, or status data concerning the accountability information for a design or a product. No third-party vendor's database could supply such data for Brown's program user's organization, nor could any single, separate EDA tool; nor would such information be present in any EDA tool's "design file"; for current state or status data pertains to the management of the design *process* rather than the specific details of the *design*. The very act referenced in Brown [0063] of 'dragging and dropping' a database icon, which is part of the process information that would be recorded in the current state information, as also would be the identity of the individual who performed that 'dragging and dropping'; yet Brown neither suggested nor discussed recording this information, since it pertains to the management of the process (as opposed to action of designing).

For these reasons, the above rejections are traversed, and the Applicant respectfully requests that they be allowed to proceed to issue, as amended.

CLAIM REJECTIONS – 35 USC §103

The Office Action rejected Claims 4, 64 and 66 as being rendered obvious by U.S. Patent Publication 2002/0156757 (Brown, et al.) combined with another reference.

Claim 4 is rejected as being unpatentable over the combination of Brown and U.S. Patent 4,862,376 (Ferriter, et al.). Specifically, the OA noted (in para. 28) that Ferriter "shows a module for translation from an engineering drawing for such product to a design" (Ferriter Fig. 12; Abstract).

The abstract is entirely silent as to any such module, saying only that "From this file an image of the bill of materials can be displayed in the CAD/CAM environment. The designer can use this image as an aid in the design process. Item names and numbers can be copied from the displayed bill of materials to the CAD/CAM image. The bill of materials can also be edited in the CAD/CAM environment and the edited bill of materials can then be reconstructed in the conceptual design tool for use in the continuing design and planning process." (Abstract.)

As Ferriter describes his invention, it involves using a Bill of Materials, which "becomes a menu for selecting standard drawings to aid in the design process" (col. 11, lines 15-17). However, even if a standard drawing is selected, it is only incorporated as a drawing. Ferriter, in explicitly stating that this ability "greatly simplifies the drawing, and hence the design, process" (col. 12, lines 21-22), concedes that there is another step between creating a drawing and creating a design.

Brown's application, as noted above, only discloses an "interface", or means for sharing information across different vendor databases and EDA tools. If Ferriter is combined with Brown (and neither the references not the Examiner cite any source for such), then one gets a computer interface for chosing and then sharing a drawing across EDA tools.

In contrast, Claim 4 explicitly incorporates the translation from a bill of materials to a design. It also incorporates the current state information, including decision and accountability information, that is missing from Brown.

None of the elements previously identified as being absent in Brown but present in Claim 1 (including specifically the documentation unification, tracking, and control (Applicant's Specification, p. 12, lines 18-28), information concerning the lifecycle of a product especially most specifically, information about the current state of the process of design and/or manufacture, or an Auto Engineering Change Order Subsystem; a Bill of Materials Generator; and, a Design Subsystem, which in turn incorporated each of: a Design Rules Check Engine; an Assembly Drawing Generator; a Verification Module; a Simulation Module; and, a Testing Subsystem (for Hardware and Software (Applicant's Specification, p. 12, line 30 to p. 13, line 13)), are present in Ferriter or suggested by the combination of Ferriter and Brown. For Brown and Ferriter address only the creation of a single design, and are silent as to the management of the design process – and most particularly, as to the auxiliary materials and records concerning the project's status, which often are as important as the design files themselves to the successful development and manufacture of a product from a design.

Applicant's Claim 4 dependS on Claim 1, and for the above reasons, the OA's rejection is deemed traversed, and this claim is respectfully ready to issue.

Claim 63, though not specifically addressed, was omitted from the list of those deemed allowed, and has been cancelled.

Claim 64 has been cancelled.

Claims 65-66 are rejected as being unpatentable over Brown, despite the fact that the OA concedes that the latter includes no mention of an Interactive Help Module of Claim 64 nor any of the specific limitations claimed in Claims 65 and 66. There is only an assertion that "[h]elp menus and tutorial menus are well known parts of a software program" (OA paragraph 33). Help menus and tutorial menus for a software program focus on the operation and use of the program – at least those disclosed by the OA, which arise from "all programming systems for creating windows programs". These do not contain any of the substantive material for the field of the software program – otherwise, these same programming systems would have to both contain source material for all possible substantive knowledge fields and means to particularly attach only that minute sub-set relevant to the substantive field of the created program. (Which capacity, incidentally, would violate an extension of Turing's Halting Problem.) The 'windows programming tools' do not incorporate any substantive knowledge or information about or pertaining to electronic engineering, financial management, business operations, physics, geology, language translation, statistical analysis, law, art, literature, or other substantive fields; they simply know Windows programming – an entirely separate field.

Accordingly, no such automatically-created help menu and tutorial could provide substantive material relating to the field in which the software program operates such as the "general engineering library with incorporated references" and "technical overview for each field of engineering contained within the database and subsystems", specifically mentioned in Claim 65.

Similarly, tutorial menus for a software program teach the user how to use the software program; they do not incorporate training material in the substantive field as does Claim 65, which specifically incorporates: a set of design challenges; for each design challenge, a previously-worked-out solution set of satisfactory designs; and, instruction for relative evaluation of the members of the solution set against the constraints and decisions which produced each member of the solution set.

The addition of substantive material relevant to the particular design field(s) for the Applicant's program differentiates the final product from one containing merely help and tutorial assists that teach the user how to use the program – and such 'how to use this program' efforts are not what Applicant seeks to claim in Claims 64-66! Because the OA failed to distinguish between these different categories of 'process' and 'substantive' help and tutorial efforts, the evaluation of 'obviousness' from 'programming systems for creating windows programs' is flawed and unsupportable. For this reason, the rejection is traversed and the claims should be allowed to issue.

ALLOWABLE SUBJECT MATTER

In the OA, Claims 12-35, 38-39, 48-62, and 67 were objected to as being dependent upon a rejected base claim, but otherwise allowable if rewritten into independent form (OA, para. 34) and all USC 101/112 rejections were removed.

Applicant believes that the rejection of independent Claim 1 has been traversed for the grounds given above. As Claims 2-11, 36-37, and 63-66 are dependent upon Claim 1, this traversal applies equally to them. Applicant is open to and requests discussion through a telephone interview, should the Office decide that the rejection of Claim 1 has not been traversed, of the redrafting of the claims 1-11, 36-37, and 65-66. To assist and expedite cooperation between the Office and Applicant, some outline of the possibilities follows.

In light of Ferriter and Brown, Claims 3-5 could be (a) replaced by a similar claim that is dependent upon a later-occurring, but acceptable, independent claim (e.g. a re-written Claim 12); or (b) incorporate a specific limitation requiring the incorporation of product (not "design file") specific data as part of the translation process. As Claims 6-9 already incorporate product or project data beyond the reach of Ferriter and Brown, these should be allowed; but again, they could be replaced by a similar claim dependent upon a later-occurring, but acceptable, independent claim. Lastly, although Applicant believes that Claims 10 and 11 also incorporate "status data" that puts them beyond the reach of Ferriter and Brown, these should be allowed; but they either could be replaced in like fashion or amended to incorporate a specific limitation as to the nature of the data to more clearly distinguish them from Brown's material-related data [¶0093, 0094], which he also calls "materials data" [¶0096].

The OA indicated that Claim 12 would, upon incorporating all of the prior limitations, be allowable if rewritten as an independent claim. It then should be acceptable to have Claims 36, 37, 39, 40-45, and 67 be made dependent upon Claim 12, which would make them also allowable. This should also make Claims 46, 47, and 65-66 allowable.

For all of the above grounds and reasons the Examiner is respectfully requested to allow the claims.

If the Examiner has any questions or wishes to discuss this matter he is urged to telephone the Applicant's attorney, George S. Cole, Esq., at (650) 322-7760; or may direct an e-mail communication to the same individual via the e-mail address of GSCdLawyer@aol.com.

A claims listing with the status of each claim, with the claims in ascending order, and with the text of the currently-amended claim, has been appended to this Response. This listing of claims will replace all prior versions, and listings, of claims in the application.

As so corrected, the Applicant believes that these claims are now all in presently allowable, correct, and proper form, and respectfully asks that a timely Notice of Allowance be issued in this case.

Respectfully Submitted:

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